DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
WASHINGTON, DC 20361 -0001

IN REPLY REFER TO

NAVAIRINST 4100.2B
AIR-4221
21 Jun 88

NAVAIR INSTRUCTION 4100.2B

From: Commander, Naval Air systems Command

Subj: NAVAL AIR SYSTEMS COMMAND SHORE ACTIVITIES ENERGY MANAGEMENT PROGRAM

Ref: (a) OPNAVINST 4100.5C
(b) Department of the Navy Energy Plan of Sep 85
(c) OPNAVINST 4100.9A

Encl: (1) Responsibilities of NAVAIR in the Navy Energy Management Program
(2) Naval Air Systems Command Energy Management Team

1. Purpose. To reiterate the policy, goals, and objectives of the Navy Energy Management Program as delineated in reference (a) and to assign responsibilities for the implementation of the Navy Energy Management Program within the Naval Air Systems Command (NAVAIR).

2. Cancellation. This instruction supersedes NAVAIR Instruction 4100.2A of 11 June 1980. Since this is a major revision, changes are not indicated.

3. Background

a. References (a) through (c) set forth objectives and goals for the Navy Energy Resources Management Program and provide overall policy guidance. NAVAIR functions and responsibilities have been tasked to include the following:

(1) Provide the necessary criteria, operations and maintenance standards, management guidance, and engineering expertise necessary to identify and implement conservation actions to assist the Chief of Naval Operations (CNO) in meeting the energy objectives and goals.

(2) Ensure that energy efficiency and fuel flexibility are taken into account in the design and acquisition of new facilities, and the modification of existing facility assets.

(3) Ensure that with the approval of facility projects, that the potential impact of energy consumption is balanced against other requirements.

b. The NAVAIR focus on energy conservation must include a broad coverage to encompass overall facility designs, production, maintenance, and operations. In addition, efficient energy utilization criteria must be integrated into specifications, designs, and industrial operating processes as part of the cost of "doing business." This focus involves program activity from all of the areas of NAVAIR.

4. Objectives. In compliance with national and Department of Defense energy conservation objectives, the primary objectives of the NAVAIR shore establishment energy conservation program are to:

a. Improve fleet readiness/sustainability and reduce costs through application of more energy efficient facilities and systems throughout the supported establishment and operating force.

b. Maintain energy consumption for all cognizant activities at the lowest practical level consistent with mission requirements, operational readiness, and safety.

c. Substitute more abundant or renewable energy sources for petroleum, where practical and cost effective.

d. Incorporate effective energy planning in the system concept formulation, development and production phases of the acquisition process.

e. Review operational programs to ensure optimum conservation of energy resources.

f. Consider the effect of energy policy actions on the health, welfare, and safety of personnel as well as the environment.

5. Energy Guidance

a. In computing the British Thermal Unit (BTU) equivalents, the conversion factor for purchased electricity will be 3413 BTU per kilowatt-hour (kWH) rather than 11,600 BTU/kWH that was used from fiscal year (FY) 1975 to FY 1985.

b. Energy consumption data at each NAVAIR activity will be accumulated by the Naval Energy and Environmental Support Activity (NEESA) from the activity's Defense Energy Information System (DEIS-II) report (Report symbol DD-A&L(M)1313(4100). This data is adjusted for fluctuations resulting from consumption changes that are beyond the control of the activity. Weather

changes are now automatically included by NEESA in the preparation of the quarterly Energy Audit Report (EAR) (Report Symbol DD-A&L(M)1313(4100), however, NEESA will allow activities to submit up to eight other variables, which would impact energy consumption, such as increases in workload, base working population, process units related to workload, and energy consuming equipment. Three years of past monthly data relative to these variables is desired, but is not mandatory. The final performance indicator for an activity's energy management progress is the adjusted energy consumption per thousand gross square feet (MBTUADJ/KSF).

c. Mobility Substitution Energy (MSE) (Report Symbol DD-A&L(M)1313(4100) is a separate energy reporting category that recognizes the fact that shore based energy is being used to avoid having ships in port use their internal fuel supplies. Moreover, flight simulators, or certain other operational trainers may also report utility consumption separately, and thereby not be included in current consumption figures for the activity.

6. Goals. The following goals, established by reference (a), apply to all NAVAIR shore activities. FY 1985 (1 October 1984 to 30 September 1985) will be used as the base line year for comparison.

a. Reduce adjusted energy consumption per thousand gross square feet (KSF) by 6 percent by the end of FY 1990, 12 percent by the end of FY 1995, and 15 percent by the end of FY 2000.

b. Reduce the estimated annual design energy usage per gross square foot by 1 percent per year for new buildings, thereby achieving a 10 percent reduction for those buildings designed in FY 1995 compared with comparable buildings designed in FY 1985.

c. Support the following overall Navy FY 1995 goals to the extent cost effective and practical:

(1) Obtain 10 percent of total Navy shore facility energy from coal, solid fuels, and renewable energy sources.

(2) Increase the miles per gallon efficiency of administrative vehicles (CESE A-N) by 12 percent, and increase the usage of alternative vehicle fuels.

7. Policy. It is NAVAIR policy that these objectives and the goals of this instruction be emphasized and carried out to the maximum extent practicable. NAVAIR organizational units involved

in the contractual support of NAVAIR Government Owned, Contractor Operated (GOCO) industrial plants are to consider the above energy goals during the development of appropriate contracts with these GOCO plants.

8. Responsibilities. NAVAIR is responsible for implementing its portion of the Navy energy program as defined in reference (a) and enclosure (1). The Naval Air Systems Command Headquarters (NAVAIRHQ) Assistant Commander for Fleet Support and Field Activity Management (AIR-04) is hereby assigned overall responsibility for coordinating the NAVAIR energy program. The NAVAIR energy program team organization is shown schematically in enclosure (2). Delegation of responsibilities is as follows:

a. NAVAIRHQ Director, Facilities Management Division (AIR-422) is responsible for

(1) developing and coordinating appropriate overall NAVAIR energy positions or strategies to implement reference (a) and enclosure (1); and

(2) providing corporate oversight of the NAVAIR energy program, coordinating the planning and programming of resources utilized, and providing the forums necessary for addressing NAVAIR-wide issues or problems in the energy program execution.

b. NAVAIRHQ energy manager (AIR-4221B) is the point of contact for NAVAIR shore establishment energy conservation matters and is responsible for

(1) maintaining liaison with Office of the Chief of Naval Operations (OPNAV), Naval Facilities Engineering Command (NAVFACENGCOM) and other related organizations for energy planning and reporting purposes;

(2) coordinating the preparation of periodic energy plans, reports, and appraisals as required or requested by higher authorities;

(3) coordinating/establishing, where appropriate, the energy councils to carry out energy management programs at the NAVAIR shore establishment/GOCO level, and providing tasking of functional groups in NAVAIRHQ and shore establishment for energy technical matters; and

(4) convening and chairing energy council meetings and other forums as appropriate.

c. Operations Division (AIR-433) is responsible for coordinating the energy management programs at the naval aviation depots.

d. Range and technical field activities/GOCO/naval aviation depots energy councils are responsible for providing the interchange of ideas relative to new technology and/or unique techniques and applications for energy management. Moreover, the range and technical field activities/naval aviation depots energy council members will be involved in the Energy Conservation Improvement Program (ECIP), Energy Technology Applications Program (ETAP), and Energy Engineering Program (EEP).

e. NAVAIR supported activities are responsible for

(1) designating/establishing a group of local energy conservation engineers and specialists, and submitting the names of energy program coordinators to NAVAIRHQ (AIR-4221B);

(2) designating and providing suitable representatives for the NAVAIR energy councils as appropriate;

(3) developing comprehensive energy plans to ensure maximum compliance with Navy energy goals and objectives;

(4) identifying, developing, preparing and submitting facilities project documentation for ECIP, ETAP, third-party venture capital, shared energy savings contracts and other energy conservation programs for submission to NAVAIRHQ (AIR-4221B) via the cognizant NAVFACENGCOM Engineering Field Division (EFD), where appropriate;

(5) developing and implementing a tracking system for the variables associated with the DEIS-II report (Report Symbol DD-A&L(M)1313(4100) and the performance factors indicated in paragraph 5b of this instruction;

(6) reviewing all facility projects to ensure that appropriate energy saving techniques have been included in the project's design; and

(7) supporting NAVAIRHQ in the NAVAIR energy program.

9. Action. Addressees will take appropriate action to support the energy program following the policies, objectives, goals and responsibilities contained in this instruction.

R. C. GENTZ
Vice Commander

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RESPONSIBILITIES OF NAVAIR IN THE NAVY ENERGY MANAGEMENT PROGRAM

1. NAVAIR has been assigned the following actions by CNO in carrying out the NAVAIR portion of the Navy Energy Management Program.

a. Act for the CNO in controlling, planning and coordinating cognizant shore activities energy management matters.

b. Provide the necessary criteria, operations and maintenance standards, management guidance, and engineering expertise necessary to identify and implement those actions that will best assist the cognizant field activities in meeting the Navy's energy goals.

c. Establish energy resource management plans to achieve the objectives, goals and standards established by higher authorities, and direct subordinate activities to do the same.

d. Establish line responsibility for energy resource management at all echelons.

e. Identify, submit and implement appropriate programs for the most effective energy conservation actions to meet established goals.

f. Establish, as part of NAVAIR field activity procedures, that facility architectural-engineering contracts or in house design efforts shall include provisions ensuring that the consideration of energy conservation, life cycle costs, and availability of alternative energy sources are taken into consideration. Energy conservation engineers should review facility project designs to ensure that the designs conform with applicable energy management criteria.

g. Incorporate energy effectiveness reviews into the acquisition process.

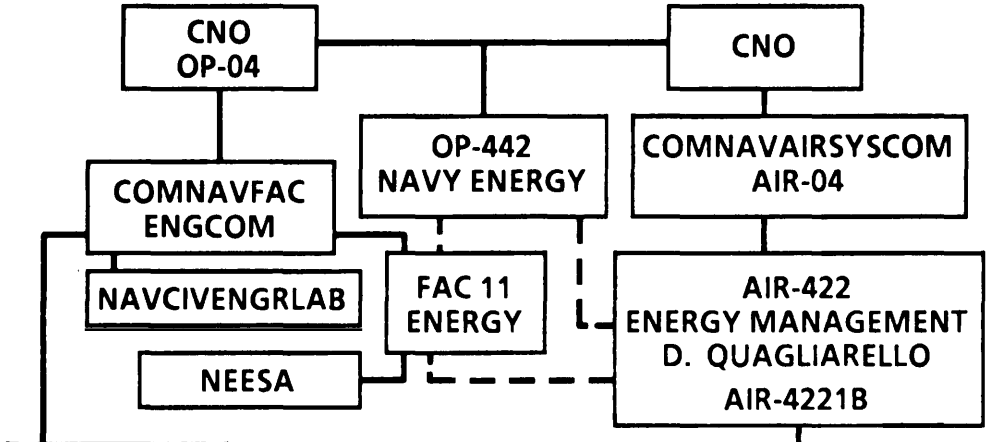
h. Ensure that energy information reported to Defense Logistics Agency through the DEIS (Report Symbol DD-A&L(M)1313(4100) is accurate and timely. Such reported data shall be based upon metered consumption when available. Non-metered consumption shall be based upon best engineering estimates, updated as necessary.

i. Monitor energy conservation programs at subordinate activities to ensure standards, goals and objectives are achieved.

j. Monitor energy resource management of government owned, contractor operated industrial plants for compliance with the energy goals and standards, and measure and report resulting savings.

k. Develop and publish guidelines for implementation of an Energy Conservation Contingency Plan (ECCP) at each NAVAIR shore activity. These guidelines should be broad enough to cover all energy source contingencies such as short term brown-outs and supply interruptions as well as long term energy unavailability. The guidelines should be specific enough to cover all possible actions including fuel substitution or conversion, load shedding, operational modifications, etc., available to each individual activity. Field activities should regularly conduct load-shedding drills.

NAVAL AIR SYSTEMS COMMAND ENERGY MANAGEMENT TEAM



ENGINEERING FIELD DIVISIONS	RANGE AND TECHNICAL FIELD ACTIVITIES ENERGY COUNCIL	AIR-433 NAVAVNDEPOT ENERGY COUNCIL	GOCO INDUSTRIAL PLANT ENERGY COUNCIL - NAVAL WEAPONS INDUSTRIAL RESERVE PLANTS
CHES NAVFACENGCOM	NAVAIRTESTCEN PATUXENT RIVER, MD		
LANT NAVFACENGCOM		NORFOLK, VA CHERRY POINT, NC	
SOUTH NAVFACENGCOM	NUSCDET, AUTEC, BAHAMAS NAVTRASYSCEN, ORLANDO, FL	JACKSONVILLE, FL PENSACOLA, FL	HERCULES CORP., McGREGOR, TX VOUGHT CORP., DALLAS, TX RAYTHEON CO., BRISTOL, TN
WEST NAVFACENGCOM	NAVWPNCEN, CHINA LAKE, CA COMPACMISTESTCEN PT MUGU, CA	ALAMEDA, CA NORTH ISLAND, CA	
NORTH NAVFACENGCOM	NAVAIRPROPCEN, TRENTON, NJ NAVAIRENGCEN, LAKEHURST, NJ NAVAVIONICCEN INDIANAPOLIS, IN		GRUMMAN AERO CORP., BETHPAGE, NY GRUMMAN AERO CORP., CALVERTON, NY KAMAN AERO CORP., BLOOMFIELD, CT RAYTHEON COMPANY, BEDFORD, MA TELEDYNE CAE, TOLEDO, OH McDONNELL DOUGLAS CORP. ST. LOUIS, MO
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